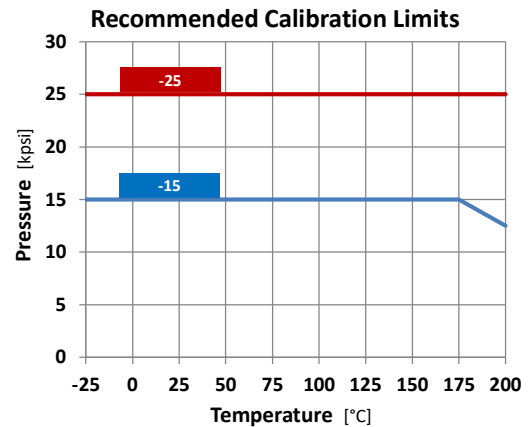
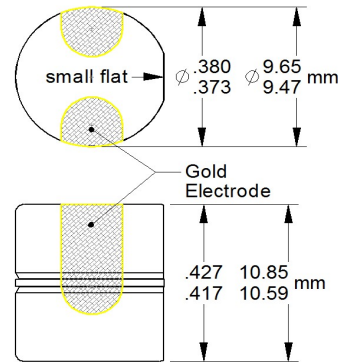
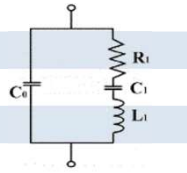


Mini Quartz Pressure Sensors

QMC-15 QMC-25

Calibration Pressure(s)	up to 15 kpsi 1035 bar	up to 25 kpsi 1725 bar
Calibration Temperature(s)	varies with pressure; see chart	
¹ Achievable Accuracy	0.020% FS	0.025% FS
² Sensor Sensitivity at 25°C	2.0-2.4 Hz/psi 29-35 Hz/bar	2.0 Hz/psi 29 Hz/bar
Aging on the shelf	Negligible	
Longterm stability at max P/T	0.020% FS	0.025% FS (per year)
³ Max overpressure at T _{max}	16.5 kpsi 1140 bar	27.5 kpsi 1900 bar
⁴ Frequency (3 rd OT)	7210 ± 4 kHz	
⁴ Series Resistance, R ₁	< 200 Ω	(125 Ω typ)
⁴ Motional Capacitance, C ₁	0.34 ff typ.	
⁴ Inductance, L ₁	1.4 henry typ.	
⁴ Static Capacitance, C ₀	1.5 pf typ.	
⁴ Max Drive Level	100 μW	
⁴ DLD (ΔR ₁ , 10 steps 1-100μW)	< 10 Ω	



¹ Conformance to primary pressure standard. Includes repeatability, hysteresis, and corrected linearity. Accuracy improves with narrower temperature and lower pressure ranges (i.e., a 15k/175°C calibration yields better absolute accuracy than a 25k/200°C cal.)

Pressure resolution is a function of sensor sensitivity, pressure, temperature, timebase, circuit jitter, counting method, and sample time. Both crystals are capable of resolution better than 0.01 psi (69 Pa) using reciprocal counting with a 7.20MHz timebase.

³ Recalibration may be necessary after overpressure.

⁴ Crystals measured using a S&A 250B network analyzer with no capacitance load at 25°C



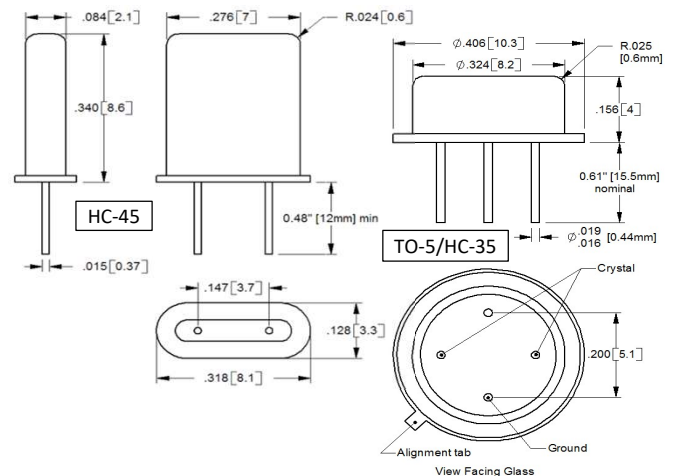
Quartz Temp/Ref Crystals

	QTC	QTC-Y	QRC
Purpose	Temperature	Temperature	Reference
⁶ Package Availability	TO-5/HC-35	HC-45	TO-5/HC-35
Operating Range	-20 to 200°C -4 to 392°F		
Average Sensitivity, 25-200°C	200 Hz/°C	700 Hz/°C	100 ppm
⁷ Resolution at 25°C	0.0010°C	0.0007°C	-
Resolution at 200°C	0.0002°C	0.0001°C	-
Aging on the shelf	Negligible	Negligible	Negligible
Aging at 180°C	< 2 ppm/yr	< 2 ppm/yr	< 2 ppm/yr
⁴ Frequency	7150 ± 6 kHz	7045 ± 10 kHz	7200 ± 4 kHz
⁴ Series Resistance, R ₁	< 25 Ω	< 40 Ω	< 25 Ω
⁴ Motional Capacitance, C ₁	3.9 ff typ.	5.9 ff typ.	1.4 ff typ.
⁴ Inductance, L ₁	130 mH typ.	85 mH typ.	360 mH typ.
⁴ Static Capacitance, C ₀	1.2 pf typ.	1.1 pf typ.	2.1 pf typ.
⁴ Max Drive Level	10 μW	10 μW	10 μW
⁴ DLD (ΔR ₁ , 10 steps 1-10μW)	2.5 Ω	3.5 Ω	2.5 Ω

⁶ The TO-5/HC-35 package is a 4-point mount (more rugged).
The HC-45 package is a 2-point mount and fits in smaller spaces.

⁷ Temperature resolution is a function of sensitivity, temperature, timebase, circuit jitter, counting method, and sample time.

Contact us for additional mechanical packaging options.



Frequency versus Temperature

